

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-183-2
Relating to Exemptions Under Section 27156
of the Vehicle Code

PERFECTION AUTOMOTIVE PRODUCTS CORPORATION
"THREE-WAY PLUS OXIDATION CATALYTIC CONVERTER USED AS
OXIDATION CATALYTIC CONVERTER"

WHEREAS, Vehicle Code Section 27156 and Title 13 California Code of Regulations (hereafter "CCR") Section 2222(h), authorize the California Air Resources Board (ARB) and its Executive Officer to exempt new aftermarket catalytic converters from the prohibitions of Vehicle Code Section 27156.

WHEREAS, Perfection Automotive Products Corporation of 12445 Levan Road, Livonia, Michigan 48250, has applied to the ARB for exemption from the prohibitions of Vehicle Code Section 27156 for their new aftermarket three-way plus oxidation (TWC + OC) catalytic converter for use as two-way for the following application:

<u>Converter Type</u>	<u>Part No.</u>	<u>Max. Engine Size</u>	<u>Max. Veh. Weight</u>
TWC + OC (as OC)	23075,23077 23078,23079 23088,23089	7.5L (460 CID)	7,000 lbs.

WHEREAS, pursuant to the authority vested in the Executive Officer by Health and Safety Code Section 39515 and in the Chief, Mobile Source Division by Health and Safety Code Section 39516 and Executive Order G-45-5, the Air Resources Board finds that the above aftermarket catalytic converter complies with California Vehicle Code Section 27156 and Title 13, California Code of Regulations, Section 2222(h).

IT IS HEREBY RESOLVED that the above catalytic converter is exempt from the prohibitions of Vehicle Code Section 27156 for installation on the approved application vehicles subject to the following conditions:

1. No changes are permitted to the converter as described in the application for exemption. Any changes to the converter or any of its components, applicable model year, or other factors addressed in this order must be evaluated and approved by the Air Resources Board prior to marketing in California.
2. Marketing of the converter using identifications other than those shown in the exemption application or marketing of the converter for applications other than those listed in the application catalog shall be prohibited unless prior approval is obtained from the Air Resources Board. Exemption of this product shall not be construed as an exemption to sell, offer for sale, or advertise any components of the converter as individual devices.

PERFECTION AUTOMOTIVE PRODUCTS CORPORATION
"NEW AFTERMARKET 3-WAY PLUS OXIDATION
CATALYTIC CONVERTER FOR USE AS 2-WAY
CONVERTER"

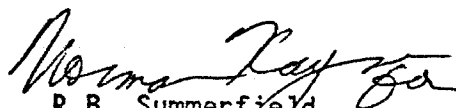
EXECUTIVE ORDER D-183-2

(Page 2 of 2)

3. Any oral or written references to this Executive Order or its contents by Perfection Automotive Products Corporation., its principals, agents, employees, distributors, dealers, or other representatives must include the disclaimer that the Executive Order or the exemption it provides is not an endorsement or approval of any emissions reduction claims for the catalytic converter and is only a finding that the converter is exempt from the prohibitions of Vehicle Code Section 27156.

Violation of any of the above conditions shall be grounds for revocation of this order. The order may be revoked only after ten day written notice of intention to revoke it, during which period the holder of the order may request in writing a hearing to contest the proposed revocation. If a hearing is requested, it shall be held within ten days of receipt of the request, and the order may not be revoked until a determination is made, after the hearing, that grounds for revocation exist.

Executed at El Monte, California, this 16th day of August, 1990.


R.B. Summerfield
Assistant Division Chief
Mobile Source Division

State of California
AIR RESOURCES BOARD

EVALUATION OF PERFECTION AUTOMOTIVE PRODUCTS CORPORATION NEW AFTERMARKET
3-WAY PLUS OXIDATION CATALYTIC CONVERTER FOR USE AS A 2-WAY CONVERTER
FOR EXEMPTION FROM THE PROHIBITIONS OF VEHICLE CODE SECTION 27156 AND
TITLE 13, CALIFORNIA CODE OF REGULATIONS, SECTION 2222(h)

August, 1990

EVALUATION OF PERFECTION AUTOMOTIVE PRODUCTS CORPORATION NEW AFTERMARKET
3-WAY PLUS OXIDATION CATALYTIC CONVERTER FOR USE AS A 2-WAY CONVERTER
FOR EXEMPTION FROM THE PROHIBITIONS OF VEHICLE CODE SECTION 27156 AND
TITLE 13, CALIFORNIA CODE OF REGULATIONS, SECTION 2222(h)

by

Mobile Source Division

State of California
AIR RESOURCES BOARD
9528 Telstar Avenue
El Monte, CA 91731

(This report has been reviewed by the staff of the California Air Resources Board and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Air Resources Board, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.)

SUMMARY

Perfection Automotive Products Corporation (Perfection) of 12445 Levan Road, Livonia, Michigan 48150, has applied for exemption to use their new aftermarket three-way plus oxidation (TWC + OC) catalytic converter for oxidation (OC) or two-way application, under the California regulations for new aftermarket catalytic converters. Perfection plans to use the converter for oxidation application on vehicles with engines up to 7.5 liters and maximum weight of 7000 lbs.

Emissions data submitted show that the catalytic converter meets the requirements of Vehicle Code Section 27156 and Title 13, California Code of Regulations, Section 2222(h) for the stated application. Based on the above, the staff recommends that the exemption be granted as requested.

CONTENTS

	<u>Page Number</u>
<u>SUMMARY</u>	i
<u>CONTENTS</u>	ii
I. <u>INTRODUCTION</u>	1
II. <u>CONCLUSION</u>	1
III. <u>RECOMMENDATION</u>	1
IV. <u>DEVICE DESCRIPTION</u>	2
V. <u>DEVICE EVALUATION</u>	2
<u>APPENDIX</u>	A-1
Aging and Test Vehicles' Parameters	

EVALUATION OF PERFECTION AUTOMOTIVE PRODUCTS CORPORATION NEW AFTERMARKET
3-WAY PLUS OXIDATION CATALYTIC CONVERTER FOR USE AS A 2-WAY CONVERTER
FOR EXEMPTION FROM THE PROHIBITIONS OF VEHICLE CODE SECTION 27156 AND
TITLE 13, CALIFORNIA CODE OF REGULATIONS, SECTION 2222(h)

I. INTRODUCTION

Perfection Automotive Products Corporation (Perfection) of 12445
Levan Road, Livonia, Michigan 48150 has applied for an exemption to use
their new aftermarket three-way plus oxidation (TWC + OC) catalytic
converter, for oxidation and two-way application, in accordance with the
California regulations on new aftermarket catalytic converters. The
intended converter application is shown below:

<u>Type</u>	<u>Part No.</u>	<u>Max. Engine Size</u>	<u>Max. Veh. Wt.</u>
TWC + OC (as OC)	23075,23077	7.5L (460 CID)	7000 lbs
	23078,23079		
	23088,23089		

II. CONCLUSION

The applicant has submitted all the required information and based
on the submitted exhaust emissions test data, the staff concludes that the
catalytic converter meets the criteria set forth in Vehicle Code Section
27156 and Title 13, California Code of Regulations, Section 2222(h) for the
stated applications.

III. RECOMMENDATION

The staff recommends that the exemption be granted as requested and
that Executive Order No. D-183-2 be issued, permitting the advertisement,
sale and installation of the new aftermarket catalytic converter as
oxidation or two-way converter on vehicles with engines up to 7.5 liters and
maximum weight of 7000 lbs.

IV. DEVICE DESCRIPTION

The Perfection three-way plus oxidation substrates are coated with platinum, palladium and rhodium with the air injection tube between the reducing and oxidizing substrates disconnected or plugged. The substrates are enclosed in an outer shell or container of stainless steel. The substrates are wrapped with an alumina-silica ceramic fiber which has low thermal conductivity and shock resistance properties. An aluminum heat shield is also welded to the upper side of the converter to protect the vehicle underbody from heat. The catalytic converter is sold with installation instructions and kits as shown in the application catalog. It is also sold with a warranty for 25,000 miles on the substrates and five years or 50,000 miles on the container or shell.

V. DEVICE EVALUATION

Perfection submitted test data on the catalytic converter. The tests were conducted by Automotive Testing and Development Services, Inc. (ATDS), Huntington Beach, California. The mileage accumulation and test vehicle parameters for the converter applications are shown in the appendix. Two CVS-75 emission tests were conducted on each of the test vehicles with the converter installed and two CVS-75 tests were conducted with exhaust backpressure simulator. The tests were conducted following the accumulation of 25,000 miles on each of the two test converters.

The vehicles used in the accumulation of 25,000 miles had an engine displacement of 7.5 liters and vehicle weight of 7000 lbs. Exemption for the converter is limited to vehicles up to 7.5 liters and 7000 lbs. in order to conform to the "worst case" requirement of the California regulations. The test results and conversion efficiencies for the oxidation application are shown below:

<u>TWC + OC used as OC</u>				
	<u>Simulator</u>	<u>Converter 1</u>	<u>Converter 2</u>	<u>Avg. Efficiency.</u>
HC (g/mi)	3.128	0.596	0.534	81.9%
CO (g/mi)	55.096	7.496	7.799	86.1%

The above conversion efficiencies meet the requirements of the California regulations. The staff based the evaluation of the new aftermarket catalytic converter on the information submitted by Perfection and on test data from Automotive Testing and Development Services, Inc.

APPENDIX

A	B	C	D
Converter Type	Aging Veh. Parameters	Test Veh. Parameters	Part No.
1. TWC + OC	a. 7.5L 7000 lbs.	7.5L 7000 lbs.	23075,23077,
(as OC)			23078,23079,
			23088,23089
	b. 7.5L 7000 lbs.		